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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,739	09/28/2001	Woong Kwon Kim	043694-5015-03	2171
9629	7590	12/21/2004	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			HON, SOW FUN	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/964,739

Applicant(s)

KIM, WOONG KWON

Examiner

Sow-Fun Hon

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 29 November 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.  
2. ☐ The proposed amendment(s) will not be entered because:  
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ they raise the issue of new matter (see Note below);  
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_.

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: of the reasons in the attachment to the advisory action.  
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.  
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: \_\_\_\_\_.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.  
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.  
10. ☒ Other: Attachment to advisory action

*Advisory Action*

1. The request for reconsideration has been fully considered but is deemed not to place the application in condition for allowance. Applicant's arguments are addressed below.
2. Applicant argues that the statement in Kimock, that "DLC coatings are typically under significant compressive stress" merely suggest that Kimock teaches that the DLC layer is under compressive stress i.e that it often receives compressive stress from outside forces, and does not teach that the DLC layer imparts a compressive stress to the outer surface of the glass substrate.

Applicant is respectfully apprised that by being under significant compressive stress from outside forces, the DLC layer transfers or imparts the compressive stress to the underlying surface layers as long the layers are in intimate contact with each other. The interlayer of silicate ( $\text{SiO}_2$ ) layer is highly adherent to both the DLC layer and the underlying glass substrate (column 12, lines 35-40), which means that that the layers are indeed in intimate contact to allow for the compressive stress transfer.

3. Applicant argues that Kitayama, the primary reference, merely teaches that a glass substrate is chemically changed to create compressive stress in its outer layer.

Applicant is respectfully reminded that by teaching that the outer layer of the glass substrate is chemically changed in order to create compressive stress in the outer layer, Kitayama teaches that a new separate layer is inherently present, which has compressive stress (column 6, lines 60-65), and which reduces the internal tensile stress inherently present in the glass (column 6, lines 60-65) to a value of  $4 \text{ kg/mm}^2$  or less (column 15, lines 1-10). Kitayama thus provides the teaching of the protective mechanism, which enables one of ordinary skill in the art at the time the invention was made, to have used routine experimentation to provide an alternate

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protective layer which has compressive stress which is transferred or imparted to the underlying outer surface of the glass substrate, in order to reduce the tensile stress present in the glass substrate.

4. Applicant argues that Mizuta only shows a thermosetting silicone resin that allegedly has low viscosity such as tetra-alkoxysilane.

Applicant is respectfully reminded that Mizuta teaches that the tetra-alkoxysilane of Kitayama ('057, column 10, lines 60-65) is a thermosetting silicone resin ('157, column 5, lines 15-20).

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. Han*

Sow-Fun Hon

12/14/04

*Harold Pyon*

HAROLD PYON  
SUPERVISORY PATENT EXAMINER

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12/15/04